#### NRC FORM 618 U.S. NUCLEAR REGULATORY COMMISSION (8-2000) 10 CFR 71 CERTIFICATE OF COMPLIANCE FOR RADIOACTIVE MATERIAL PACKAGES a CERTIFICATE NUMBER b REVISION NUMBER c DOCKET NUMBER d PACKAGE IDENTIFICATION NUMBER PAGE PAGES 9215 9 71-9215 USA/9215/B(U) 1 OF 3

### 2 PREAMBLE

- a. This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety stancards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.
- 3. THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION
- a ISSUED TO (Name and Address)
  Neutron Products, Inc.
  22301 Mt. Ephraim Road
  P.O. Box 68
  Dickerson, MD 20842

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION Neutron Products, Inc., application dated September 14, 1992, as supplemented.

## 4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

5.

- (a) Packaging
  - (1) Model No.: NPI-20WC-6 MkII
  - (2) Description

A steel encased, lead shielded cask contained within a wooden overpack with a steel outer shell. The cask is 24 inches in diameter with a 3/8-inch thick steel spherical shell and a cavity formed by an 8-1/4-inch ID by 3/16-inch thick steel tube. Positive closure of the shielded cask is accomplished by bolted end covers at each end of the cavity. The overpack is approximately 49 inches in diameter and 59 inches high, including the lid lifting eye and the base support structure. The maximum package gross weight is 6,000 pounds.

(3) Drawings

The Model No. NPI-20WC-6 MkII packaging is constructed in accordance with Neutron Products, Inc., Drawing Nos. 240116, Rev. G; and 240122, Sheet 1 of 2, Rev. H, Sheet 2 of 2, Rev. H, except as noted in Condition No. 9 below.

## (b) Contents

(1) Type and form of material

Cobalt-60 as sealed sources which meet the requirements of special form radioactive material.

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# 5.(b) Contents (Continued)

- (2) Maximum quantity of material per package
  - (i) For sources contained within drum assembly shown as Item 5 on Neutron Products, Inc., Drawing No. 240122, Sheet 1 of 2, Rev. H:

Maximum activity not to exceed 15,000 curies, maximum decay heat not to exceed 240 watts.

(ii) For sources contained within drum assembly shown as Item 4 on Neutron Products, Inc., Drawing No. 240122, Sheet 2 of 2, Rev. H:

Maximum activity not to exceed 9,500 curies, maximum decay heat not to exceed 150 watts.

(iii) For sources contained within drum assembly shown as Item 2 on Neutron Products, Inc., Drawing No. 240122, Sheet 2 of 2, Rev. H:

Maximum activity not to exceed 6,300 curies, maximum decay heat not to exceed 100 watts.

- 6. In addition to the requirements of Subpart G of 10 CFR Part 71:
  - (a) The package must be maintained in accordance with Teletherapy Shipping Packaging Maintenance Procedure R-2019-G, Revision 1, provided in the supplement dated March 12, 2008.
  - (b) The package shall be prepared for shipment and operated in accordance with Teletherapy Shipping/Transfer Cask Unloading and Loading Procedures R-2014-G, Revision 1, provided in the supplement dated March 12, 2008.
- 7. The contents must be secured in the drum assembly so as to restrict movement in any direction to less than 0.25 inch, by lead, steel, or tungsten full diameter plugs and spacers.
- 8. The gross weight of the package must not exceed 6,000 pounds, and the inner shield cask shall be snug-fitting within the wooden overpack.
- 9. The two permanent package identification labels and the single temporary package identification holder are attached with 3/16 inch aluminum pop rivets. The two manufacturer's stamped name and date labels are attached with 1/8 inch aluminum pop rivets. The temporary identification labels are held in their holder with a single 1/4 20 stainless steel screw. The eight one-quarter inch holes remaining from previous permanent package identification labels and the twelve half inch vent holes are covered d by waterproof tape.

#### NRC FORM 618 U.S. NUCLEAR REGULATORY COMMISSION (8-2000) 10 CFR 71 CERTIFICATE OF COMPLIANCE FOR RADIOACTIVE MATERIAL PACKAGES d PACKAGE IDENTIFICATION NUMBER CERTIFICATE NUMBER b REVISION NUMBER PAGE c. DOCKET NUMBER PAGES 9215 9 71-9215 USA/9215/B(U) 3 OF 3

- 10. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
- 11. Revision No. 8 of this certificate may be used until March 31, 2009.
- 12. Expiration date: May 31, 2013

## **REFERENCES**

Neutron Products, Incorporated, application dated September 14, 1992.

Supplements dated: October 29, 1992; November 17, 1993; September 8, 1997; September 5, 2002; May 1 and October 7, 2003, and February 16, and March 15, 2007; and March 12, 2008.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Robert A. Nelson, Chief

Licensing Branch

Division of Spent Fuel Storage and Transportation

Office of Nuclear Material Safety

and Safeguards

Date: March 31 , 2008



# UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION REPORT
Docket No. 71-9215
Model No. NPI-20WC-6 MkII Package
Certificate of Compliance No. 9215
Revision No. 9

## **SUMMARY**

By application dated March 12, 2008, Neutron Products, Inc., requested a renewal to Certificate of Compliance No. 9215 for the Model No. NPI-20WC-6 MkII package. The applicant provided minor clarifications to the loading, unloading, and maintenance procedures to correct references to applicable regulations and change responsibilities within Neutron Products, Inc.

## **EVALUATION**

The applicant proposed adding a cover page signature block for the Quality Assurance Manager Radioactive Transportation to the loading, unloading, and maintenance procedures and proposed deleting the Limited Access Area Manager and Division III QA Manager signature blocks in order to reflect organizational changes within Neutron Products, Inc.

The applicant proposed to correct a typographical error in Section 7.5 of the maintenance procedure to change the reference from 10 CFR 71.13 to 10 CFR 71.19.

## CONCLUSION

The certificate was renewed as requested by the applicant. Condition No. 6 of the certificate was revised to reflect the changes described above in the Evaluation section. Condition No. 11 of the certificate was revised which authorizes use of the previous revision of the certificate for a period of approximately one year. The expiration date was changed in Condition No. 12 of the certificate to May 31, 2013. Minor edits were made in Condition Nos. 5, 9, and 10 in the certificate. These changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9215, Revision No. 9, on March 31, 2008 .